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ABSTRACT

This is a quarterly report of a project involving the analysis of the language of four Puerto Rican children living in the Boston area who are learning Spanish as a first language. The children, all male, ranged in age from 17 months to 37 months during the period of study. All had some contact with English. The data were transcriptions of spontaneous conversation between the researcher and each child. The analysis was of: (1) the order of acquisition of Spanish verb forms, and (2) the influence on the acquisition of the child's repetitions of verbs spoken previously in conversation by the adult. Errors in the children's verb systems were similar. For all, the form used in more inappropriate contexts was the third person singular. It seems that this is the basic form. Two assumptions were made about the nature of repetitions: (1) the child determines what s/he will repeat; and (2) the adult's model is not appropriate or inappropriate by itself; rather its appropriateness depends on the subject the child uses in his/her subsequent utterance, which is determined by the child. The same questions will be addressed in a subsequent study in Puerto Rico. (AMH)

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THE ACQUISITION OF SPANISH AS A FIRST LANGUAGE

NIE-G-80-0013

QUARTERLY REPORT

January-March, 1980

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Introduction

In our original proposal submitted in the spring of 1979, we proposed to analyse the acquisition of the Spanish verbs system by 4 Puerto Rican children living in the Boston area and learning Spanish as a first language. Then by the time we received word from NIE that the project would be funded, Ms. Belendez's plans changed - as detailed on our letter of December 17, 1979, and she returned to Puerto Rico to do the study there where the children will be free from contamination by the English-speaking environment in the U. S.

In the first three months of the funded project - January-March, 1980 - two activities went on simultaneously in Puerto Rico. One was the analysis of the language of the 4 Boston children who had been taped in 1979; second was the establishment of the new project in Puerto Rico and the beginning of taping of 5 children there. The first task is now completed (Belendez, 1980), and this quarterly report is a summary of those results. A full report on the second task will constitute the second progress report in June.

Repetitions and the Acquisition of the Spanish Verb System

(from Belendez, 1980)

We studied the language development of 4 Puerto Rican boys living in Boston: Rafael, Felix, Carlos and Amed. They ranged in age from 17 to 37 months during the period of study, which extended for 3 to 20 months:

Rafael: 19 - 22 months old

Carlos: 24 - 31 months old

Felix: 26 - 29 months old

Amed: 17 - 37 months old

Felix differed from the other boys in various respects. Rafael, Carlos and Amed were born in Puerto Rico and they were living in Boston as their parents had come to continue graduate studies. Felix was the only child born in Boston and whose parents lived "permanently" in Boston. The educational level of Felix's parents was lower than that of the other children's; his parents had not completed high school. Felix's parents had limited knowledge of English; the others' were English-Spanish bilinguals. Felix's parents lived in a Puerto Rican community of Boston; the others' lived in university housing in Cambridge.

Rafael was an only child. Felix, Carlos and Amed had older siblings who attended elementary public school: Felix had a sister, Amed had a brother and a sister and Carlos had a brother. For all of them, the predominant language spoken in the home was Spanish. For Felix, Carlos and Amed, their older siblings had either learned English at school or were in the process of doing so during the period in which the children were being taped. Thus, even though Felix, Carlos and Amed's exposure to English was primarily through television, they were also exposed through their siblings, as they were sometimes "taught" how to say words or phrases in English by their siblings.

Rafael attended an English-speaking day care center during the day. Felix and Amed (during the first period) stayed home with their parents, grandmother and siblings during the day. Carlos and Amed (during the second period) were with a play group of Spanish-speaking children during the mornings.

The data used were transcriptions of spontaneous conversations between the researcher, Pilar Belendez, and each child. These conversations were recorded at 2-4 week intervals. They were mostly unstructured and focused simply on the child's interests at the time.

As promised in the proposal, we analysed (1) the order of acquisition of Spanish verb forms by each child; and (2) the influence on that acquisition of the child's repetitions of verbs spoken previously in the conversations by the adult.

The Acquisition of Verb Forms

All child utterances with personal verb forms (inflected for person, tense, aspect and mood) were isolated and analyzed. The analysis performed on the verbs was based on the percentage of times an inflection was used when required (accuracy index). The requirement for an inflection was determined by taking into consideration linguistic and non-linguistic contexts. For example, when Rafael said yo lo llama, the required form was the first singular present since the explicit subject was yo (I), but the third singular was used "inappropriately" instead. All personal verb forms were classified into "appropriately" and "inappropriately" inflected, and the accuracy index for each form, in each tape, was calculated. Since whenever a form was not used as required, another form was used "inappropriately", these "errors" were further analyzed.
Following Cazden (1968), a verb form was considered as acquired when it was used in 90% of the contexts in which it is clearly required.

Chart IV (from Belendez, 1980 p. 166A), reproduced on the next page, shows the order of acquisition of verb forms in all 4 children. The order is similar for the 4 children. Average orders of acquisition were calculated by averaging the ranks of the forms acquired for all the children and ordering them accordingly. This yielded 3 different rank orders: one for all the children (considering the forms present in Rafael); one for Felix, Carlos and Amed; and one for Carlos and Amed. Chart V (Belendez, 1980, p. 169A) gives these average rank orders.

As expected by the similarities observed in their verb systems, the childrens' "errors" are similar as well. For all the children, the form used in more "inappropriate" contexts was the third singular present. It was used instead of the first singular and third plural present forms and of the imperative. For Carlos and Amed, whose systems were the most complex, it was also used instead of other tenses and persons. The fact that the "inappropriate" use of the third singular present occurs in every child taped, and that the forms instead of which it was

CHART IV ORDER OF ACQUISITION OF VERB FORMS IN ALL CHILDREN

Age	AMED	RAFAEL	FELIX	CARLOS
19		Third singular present (I) Third singular preterit (I)		
20				
21	Third singular present (VI)			
22-23				
24				Third singular present (I)
25				
26			Third singular present (I) Third singular preterit (I) First plural present (II)	Third singular preterit (IV) First plural periphrastic future (IV)
27			Imperative (III)	Third singular periphrastic future (V) Third singular subjunctive present (V) First plural present (VI) Third singular imperfect indicative (VI) First singular preterit (V)
28				Second singular preterit (VII)
29	First plural periphrastic future (XVIII)			
30	Third singular periphrastic future (XIX) Third singular preterit (XIX)			
31	Third singular imperfect indicative (XXI)			
32				
33	First singular imperfect indicative (XXII) First plural present (XXIII) Second singular preterit (XXIII)			

CHART V - AVERAGE RANK ORDER OF ACQUISITION OF FORMS IN ALL CHILDREN

RAFAEL, FELIX, CARLOS, AMED (A)	FELIX, CARLOS, AMED (B)	CARLOS, AMED (C)
1. Third singular present	1. Third singular present	1. Third singular present
2. Third singular preterit	2. Third singular preterit	2. Third singular preterit
	3. First plural present	3. Third singular periphrastic future
		4. First singular periphrastic future
		5. Third singular imperfect indicative
		6. First plural present
		7. Second singular preterit

used are similar, strongly indicates that this is the "basic" form of the child's system and that other forms stem from it. As this is the least marked form in the present tense, this is to be expected. As the third singular person was also used "inappropriately" in other tenses in which it was not the least marked form, the explanation for the pervasiveness of the use of the third singular present form is probably due to an interaction of linguistic complexity, frequency of usage and other reasons, one of which is discussed below.

The most pervasive type of "error" was the "inappropriate" use of the third singular person instead of the first singular person. This "error" is related to the linguistic complexity of the forms (evident in the present tense) and also to the change in the way the child referred to himself. There is evidence in the tapes that the children change from referring to themselves by objective "el nene" /the boy/, "el bebe" /the baby/, the child's name - to the subjective "yo" /I/, and that this change was not immediately followed by the change from the third singular to the first singular verb forms. Thus, in all the tenses and in many specific verbs, we get examples of the construction - I + third singular forms-. As it occurs in all tenses, it seems to indicate that it is related to the child's increasing awareness of himself as a subject. It may also be related to the way in which the parents talk to small children, but we did not have data on parent speech in this study.

The Influence of Repetitions

Following Bloom et al, (1974), a child's use of a verb form was considered a repetition if some form of that verb was available as a model within the preceding 5 utterances. Once a verb form was classified as a repetition, it was categorized into: (A) the adult used a form "appropriate" for the utterance the child subsequently produced and the child repeated it; (B) the child repeated, "inappropriately" for his own utterance, a form used by the adult; (C) the adult used a form "appropriate" for the utterance the child subsequently produced but the child did not repeat it; (D) the child used a form different from the adult's but

"appropriate" for her/his own utterance; and (E) the child used a form different from the adult's "inappropriate" for her/his own utterance, but the adult's was also "inappropriate". Chart I illustrates these possibilities.

(from Belendez, 1980, p. 36A) on the next page

An example of each type of repetition follows: (from Belendez, 1980 pp.36-42)

R:	Ese el pañal	/That the diaper/
mR:	Ese <u>es</u> el pañal	/That is the diaper/
(rA) R:	Ese <u>es</u> el pañal	/That is the diaper/

(10)
(I: 14-15)(11)

In this example Rafael repeated the verb form used by the adult. As he kept the subject, the model was "appropriate" for his subsequent utterance, and his imitating it produced an "appropriately" inflected

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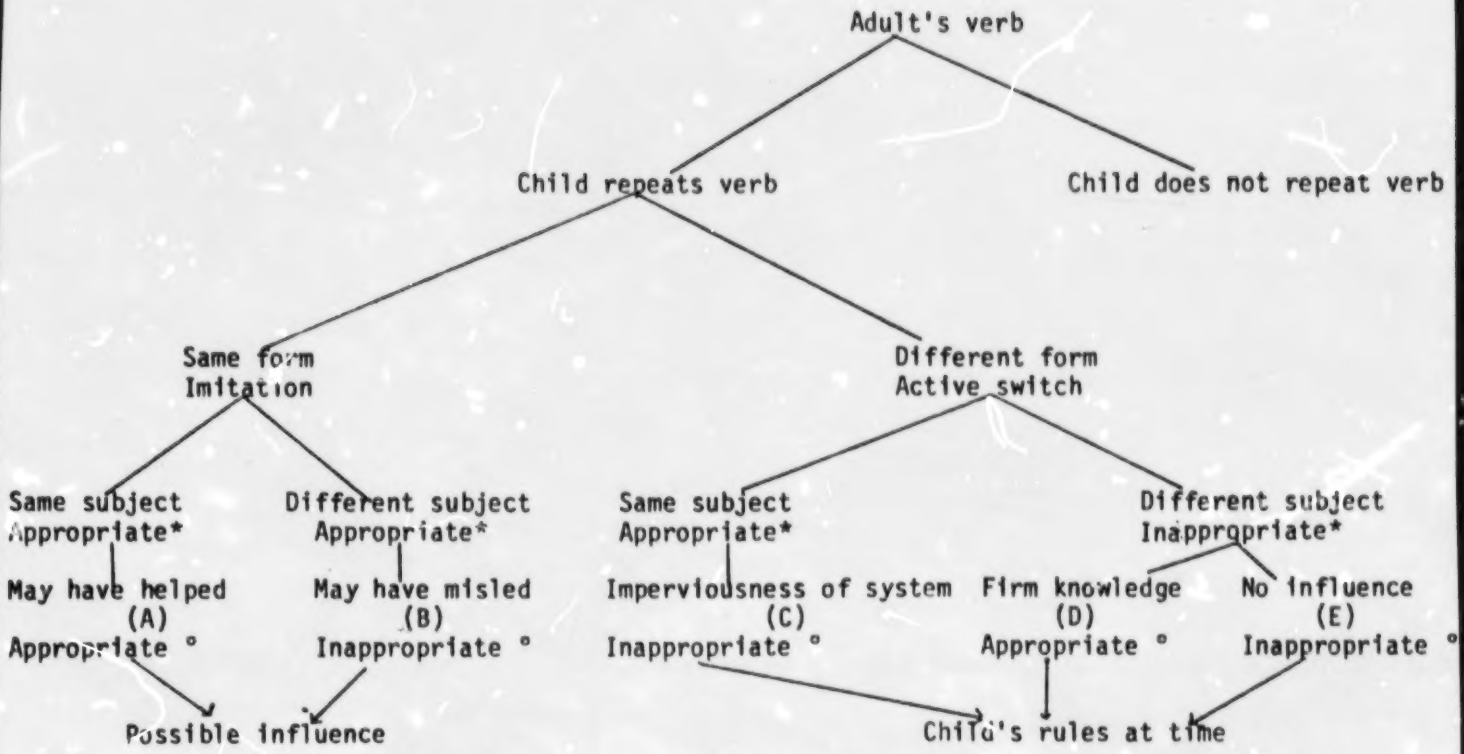
(10) Repetitions will be identified throughout the text by the small letter (r) and the capital letter of the type of repetition.

(11) Excerpts of the transcriptions included in the text are identified by tape and utterance number. The initials used to identify the speakers are: For RAFAEL - R-Rafael, mR-his mother, fR-his father; for FELIX - F-Felix, mF-his mother, fR-his father, sF-his sister; for CARLOS - C-Carlos, mC-his mother, fC-his father, bC-his brother; for AMED - A-Amed, mA-his mother, sA- his sister. For all the tapes, P-myself.

CHART I - MODEL OF REPETITIONS



° Refers to child's subsequen utterance

* Refers to adult's model as related to child's subsequent utterance

form.

mF: La apagó	/He turned it off/
(rB)*F: Apagó	/(He) turned it off/
(12)	
(IV: 60)	

In this example, Felix repeated the verb form used by his mother. The context required that he change the subject, from the third person singular to the implicit first person singular. Thus, the model was "inappropriate" for his subsequent utterance. His imitating it produced an "inappropriately" inflected form.

P: Y, ¿Cuál hizo papá?	/And, which did father make?/
C: Allí	/There/
(rC)*C: Hace papá	/Makes father/
(VII: 515)	

In this example, Carlos switched from the form I used to a different one. He did not change the subject, nor was there any contextual evidence of a necessary change in tense, making the adult's model an "appropriate" one for his subsequent utterance. His switch to a form in a different tense made it an "inappropriately" inflected one. Had he repeated the same form, it would have been "appropriate".

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(12) The star (*) indicates an utterance with an "inappropriately" inflected form.

P: ¿Quién sabe lo que le está diciendo Ms. Carla a Rafael Angel?
/Who knows what is Ms. Carla saying to Rafael Angel?/

...
/ ... /

(rD) A: Yo no sé
/I don't know/

(XXVII: 125)

In this example, Amed switched to a verb form different from the one I used. He changed the subject from the third person singular to the first person singular to refer to himself. Thus, the repetition of the same form used by the adult would have been "inappropriate" for his subsequent utterance. As he switched to the first singular form, the verb he used was "appropriately" inflected.

P: ¿Lo leo?
/(I) read it?/

(rE)*R: Sí, lea
/Yes, read/

(III:133)

In this example, Rafael switched to a form different from the one I used. As the context required an imperative, the model was "inappropriate". He switched, instead, to a third singular subjunctive present form, which was also "inappropriately" used as an imperative.

In the cases in which the switches is not made (A & B), we may say that the child is "imitating" the form used previously by the adult. This imitation might either have a "positive" or "negative" influence in the accuracy[13] of the child's developing system.

(13) Accuracy is defined as the percentage of time the form is used when contextually required.

When the child repeats the form used by the adult without changing the subject of tense, s/he uses an appropriately inflected form (A). The interpretation we make of this set of repetitions is that in these instances, the repetition of the form used previously by the adult may have helped the development of the child's system, thus having a "positive" influence on her/his developing verb system. Within these repetitions, the possibilities are: (1) that it provides the child with a form s/he did not previously have in her/his spontaneous system; (2) that it reinforces the "appropriate" use of a form s/he had used previously, but that had not yet been acquired in her/his spontaneous system; and (3) that it is simply an artifact of the analysis, as these are forms that are already present in the child's system. When s/he repeats forms that were not part of her/his spontaneous set at the time we may say that the "positive" influence is clearly evident, as it has introduced a new form into her/his verb system. When s/he repeats forms whose accuracy in the set of repetition is higher than that of her/his spontaneous forms for that particular type of form, we may say that it is highly probable that this repetition had a "positive" influence. If, however, the accuracy of both sets is similar, we can say that these repetitions are a reflection of her/his spontaneous set at the time, and thus does not have any influence. This might also apply with specific verbs, but given the impossibility of gathering a corpus that includes all the lexicon that the child has at any given time, it is more difficult to trace than for the type forms.

When the child repeats the same form used by the adult, but changes the subject or tense in the utterance, s/he uses an "inappropriately" inflected form (B). The interpretation we make of this subset of repetitions is that by adopting this form, the child may have been misled into repeating an "inappropriately" inflected form; thus, having a negative influence on her/his verb system. In this case, too, the child might or might not have the same "inappropriate" usage as in her/his spontaneous set. When the "errors" occur only in the set of repetitions because the child would not normally make them spontaneously, then her/his rules at the time could not account for them. This can only be explained as a confusion caused by the model form, or the child "adopting" the form to continue the communication. Under these circumstances we can say that repetitions of this type had a "negative" or misleading influence on her/his developing verb system. When the "errors" are shared in both her/his spontaneous and repetitions sets, we can say that this repetition is a reflection of her/his spontaneous system. One may, however, also observe an increase in the relative frequency of the "errors" in the repetitions set. This increase may have been fostered by the available "inappropriate" model; thus, even if it is a reflection of the spontaneous set, it has a "negative" influence on the accuracy of the particular form.

We can infer what the child's rules are at the instance in which the child makes a switch: i.e., uses a form different from the adult's (C,D & E). The child can make the necessary switch, leading to an

"appropriately" inflected form (D), or make the switch, though not the necessary one and leading to "inappropriately" inflected forms (C & E). In the latter case, the adult's model could have been either an "appropriate" model (C) or and "inappropriate" model (E) for the child's subsequent utterance. These instances all illustrate the active part played by the child in her/his language development, as, given a verb form used by the adult, s/he uses another forms, which is part of her/his repertoire, to verbally communicate ideas. Such instances can be interpreted as evidence of firm knowledge (when the switch is the necessary one-D), of the imperviousness of the child's system (when the adult's model was indeed "appropriate" -C), or as a reflection of her/his spontaneous system (when the switch is to an "inappropriate" form, but the adult's model was also "inappropriate" -E).

When the child makes the "appropriate" switch (D) we can say that s/he has firm knowledge of the use of the form because the model was "inappropriate" for her/his subsequent utterance. Despite the possibility of being misled by the "inappropriate" form,-as happened in B-the child is able to make the switch because that form is part of her/his system and s/he already "knows" the "appropriate" rule. We would expect that this switch will be to forms that are present in her/his spontaneous set at the time. That is, we would not expect the child to be able to switch to a form that had no prior "appropriate" use in her/his spontaneous set.

When the child switches to an "inappropriate" form, even though

the adult's model was "appropriately" inflected for her/his subsequent utterance (C), we may say that the child's system is impervious to that potentially "positive" influence, as s/he already has a "rule" to apply in those instances, which does not coincide with the adult's.

In the final case, the child switches to an "inappropriate" form, but the adult's model was "inappropriate" for her/his subsequent utterance. That is, in any case the model would not have been of any help to her/him, yet s/he does switch. The "errors" thus produced are active reflections of the child's rules at the time. Thus, it is to be expected that most of these "errors" will also be found in her/his spontaneous set, and that the switch will be from a less familiar to a more familiar form, regardless of its "appropriateness".

Two assumptions made about the nature of the repetitions, as defined for this dissertation, are that: (1) it is the child who determines what s/he is going to repeat, although her/his level of linguistic development may affect what s/he is able to repeat, and factors such as her/his interest in the topic affect how much is going to be repeated; and (2) the adult's model is not "appropriate" or "inappropriate" by itself rather its appropriateness dependes on the subject the child uses in her/his subsequent utterance, which is determined by the child her/himself.

The spontaneous verb forms and repetitions can be compared on two criteria: accuracy - defined as the percentage of time the form is used when contextually required; and complexity - defined as the number of different verb forms.

The accuracy index of the set of repetitions was then compared with the spontaneous verb forms (all those not considered repetitions) in each child's speech. In all 4 children, the spontaneous verb set was more accurate.

Rafael: in 3 out of 4 tapes

Felix: in 5 out of 6 tapes (p.05)

Carlos: in 7 out of 11 tapes (p.01)

Amed: in 20 out of 29 tapes (p.01)
(plus 7 in which the two were the same)

A factor that needs to be considered before making any conclusion about the influence of repetitions on the complexity of the verb system is the relative size of the spontaneous and repetitions sets. In every instance the set of repetitions was smaller in terms of token verbs than the set of spontaneous verbs for each child. Therefore, given the same conditions, the chance for the forms to appear was greater for the set of spontaneous verbs than it was for the set of repetitions. In fact, in almost every tape taken individually, the complexity of the spontaneous set was greater than that of repetitions. In spite of this, for Rafael and Carlos, the set of repetitions included more forms overall and the difference between the complexity of the spontaneous sets and the repetitions sets in Felix and Amed were not proportional to their token size.

We had predicted that the influence of repetitions would not be the same over time with initial appropriate imitation of forms (A) followed by an increase in the "inappropriate" repetitions (B, C & E) and finally by an increase in "appropriate" repetitions, and switches (A & D) as the system became more complex and accurate. This entire pattern of development was evident only for Amed. The other children were taped initially after some "inappropriate" repetitions were evident in their

system. For Carlos, we were able to observe the second and third period; that is, the initial increase in "inappropriate" repetitions followed by an increase in "appropriate" ones. Felix's and Rafael's systems still had an increasing trend in "inappropriate" repetitions when their last tape was made.

Because of the complexity of verb morphology in Spanish - in contrast to English - it is a particularly important focus for language acquisition research. We have addressed here both language - specific questions about the order of acquisition of verb inflections, and questions about the role of adult models and children's repetitions in the acquisition process. The two are not unrelated, because it is only with features like verbs inflected for person that the full set of repetition relationships is possible; that is, it is only with such features that a child who is continuing the same conversational topic as the adult still has to construct independently the right verb ending.

We will continue to address both sets of questions in our new work in Puerto Rico.

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